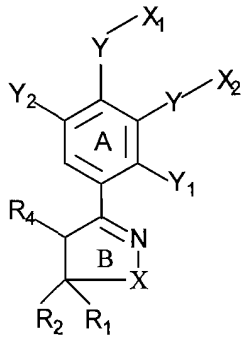
Amendment to the claims:

1. (Currently Amended) Compounds having the structure of Formula I:



Formula I

~~their~~ a pharmaceutically acceptable salt ~~salts~~, pharmaceutically acceptable ~~solvates,~~ ~~enantiomers~~, ~~diastereomers~~ enantiomer, diastereomer, or N-oxide, N-~~oxides~~ wherein

1) when X is oxygen in Formula I:

R_1 is selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cyano; nitro; amino; substituted amino; hydroxyl; alkoxy; aryloxy; COR′; COOR′

(wherein R′ can be hydrogen, alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heterocyclyl, (heterocyclyl)alkyl, or (heteroaryl)alkyl);
aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl) alkyl; (heterocyclyl) alkyl; $(CH_2)_{1-4}OR'$

(wherein R′ is as defined above, but also including hydroxy);

$C(=O)NR_xR_y$

(wherein R_x and R_y can be independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl); or $(CH_2)_m$-$C(=O)R_3$ [wherein m is an integer in the range of 0-2 and R_3 can be optionally substituted R_p or R_q (wherein R_p can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 1-4 heteroatom(s) selected from N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through N and R_q can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 0-4 heteroatom(s) selected from the group consisting of N, O and S

wherein the ring can be attached to $(CH_2)_mC(=O)$ through C) and wherein the substituents of R_3 can be one or more of: alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, halogen, hydroxyl, alkoxy, aryloxy, nitro, cyano, amino, substituted amino, hydroxyalkyl, oxo, acyl, optionally substituted amino (wherein the substituents are selected from C_1-C_6 alkyl, aryl, aralkyl, or cycloalkyl), aryl, carboxyl, alkaryl, carbamoyl, alkyl ether, $C(=O)NR_5R_6$ (wherein R_5 and R_6 are independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, aryl, and aralkyl), optionally substituted monocyclic or bicyclic 4-12 membered carbocyclic ring system (wherein the optional substituent(s) is/are selected from alkyl, alkenyl, alkynyl, halogen, hydroxyl, and alkoxy), heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl];

R_2 is selected from: cyano; heteroaryl; heterocyclyl; or $(CH_2)_nNHCOR_7$ (wherein n represents an integer 1 to 6 and R_7 can represent hydrogen, alkyl, alkenyl, alkynyl, (un)saturated , cycloalkyl, alkoxy, aryloxy, aryl, aralkyl, heteroaryl, heterocyclyl, $(CH_2)_{1-4}OR'$ wherein R′ is the same as defined above, or NR_xR_y wherein R_x and R_y are the same as defined above);

R_4 is selected from: hydrogen; alkyl; halogen; cyano; carboxy; or $C(=O)NR_xR_y$ wherein R_x and R_y are the same as defined above;

X_1 and X_2 are independently selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; acyl; aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl)alkyl; or (heterocyclyl)alkyl;

Y is selected from: an oxygen atom; a sulphur atom; or NR

(wherein R is selected from hydrogen, alkyl, alkenyl, alkynyl, un(saturated) cycloalkyl, acyl, aryl, aralkyl, heteroaryl, heterocyclyl, (heteroaryl)alkyl, or (heterocyclyl)alkyl);

Y_1 and Y_2 are independently selected from: hydrogen; alkyl; nitro; cyano; halogen; OR wherein R is the same as defined earlier; SR wherein R is the same as defined earlier; NHR wherein R is the same as defined earlier; COOR′; or COR′ wherein R′ is the same as defined above, or further, Y_1 and X_2, X_1 and Y_2, X_1 and X_2 may together form a ring fused with the ring A containing 3-5 carbon atoms within the ring and having 1-3 heteroatoms selected from N, O or S; and

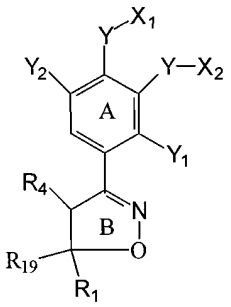
2) when X is NR_8 or S wherein R_8 is hydrogen, lower alkyl (C_1-C_6) or aryl:

R_1, R_4, X_1, X_2, Y, Y_1 and Y_2 are the same as defined above;

R_2 is selected from: $(CH)_nNHCOR_7$ (wherein n represents an integer 1 to 6 and R_7 is the same as defined above),

with the provisio that when R_2 is heterocyclyl, R_1 can not be $(CH_2)_{1-4}OR'$, $C(=O)NR_xR_y$ or $(CH_2)_m$-$C(=O)R_3$.

2. (Currently Amended) A compound having the structure of Formula XXXIV,



Formula XXXIV

~~their~~ a pharmaceutically acceptable salt ~~salts~~, pharmaceutically acceptable ~~solvates,~~ ~~enantiomers~~, ~~diastereomers~~ enantiomer, diastereomer, or N-oxide, N-~~oxides~~ wherein

R_1 is selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cyano; nitro; amino; substituted amino; hydroxyl; alkoxy; aryloxy; COR′; COOR′

(wherein R′ can be hydrogen, alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heterocyclyl, (heterocyclyl)alkyl, or (heteroaryl)alkyl);

aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl) alkyl; (heterocyclyl) alkyl; $(CH_2)_{1-4}OR'$

(wherein R′ is as defined above, but also including hydroxy);

$C(=O)NR_xR_y$

(wherein R_x and R_y can be independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl); or $(CH_2)_m$-$C(=O)R_3$ [wherein m is an integer in the range of 0-2 and R_3 can be optionally substituted R_p or R_q (wherein R_p can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 1-4 heteroatom(s) selected from N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through N and R_q can be a 4-12 membered (un)saturated monocyclic

or bicyclic ring containing 0-4 heteroatom(s) selected from the group consisting of N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through C) and wherein the substituents of R_3 can be one or more of: alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, halogen, hydroxyl, alkoxy, aryloxy, nitro, cyano, amino, substituted amino, hydroxyalkyl, oxo, acyl, optionally substituted amino (wherein the substituents are selected from C_1-C_6 alkyl, aryl, aralkyl, or cycloalkyl), aryl, carboxyl, alkaryl, carbamoyl, alkyl ether, $C(=O)NR_5R_6$ (wherein R_5 and R_6 are independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, aryl, and aralkyl), optionally substituted monocyclic or bicyclic 4-12 membered carbocyclic ring system (wherein the optional substituent(s) is/are selected from alkyl, alkenyl, alkynyl, halogen, hydroxyl, and alkoxy), heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl];

R_4 is selected from: hydrogen; alkyl; halogen; cyano; carboxy; or $C(=O)NR_xR_y$ wherein R_x and R_y are the same as defined above;

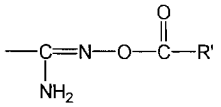
X_1 and X_2 are independently selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; acyl; aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl)alkyl; or (heterocyclyl)alkyl;

Y is selected from: an oxygen atom; a sulphur atom; or NR

(wherein R is selected from hydrogen, alkyl, alkenyl, alkynyl, un(saturated) cycloalkyl, acyl, aryl, aralkyl, heteroaryl, heterocyclyl, (heteroaryl)alkyl, or (heterocyclyl)alkyl);

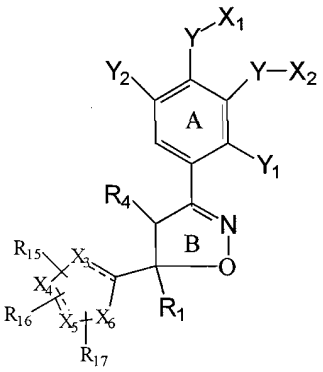
Y_1 and Y_2 are independently selected from: hydrogen; alkyl; nitro; cyano; halogen; OR wherein R is the same as defined earlier; SR wherein R is the same as defined earlier; NHR wherein R is the same as defined earlier; COOR′; or COR′ wherein R′ is the same as defined above, or further, Y_1 and X_2, X_1 and Y_2, X_1 and X_2 may together form a ring fused with the ring A containing 3-5 carbon atoms within the ring and having 1-3 heteroatoms selected from N, O or S; and

R_{19} represents $-CONHNH_2$, or



, wherein R′ is the same as defined for Formula I.

3. (Currently Amended) The compound of claim 1 having the structure of Formula XXXII,



Formula XXXII

~~their~~ a pharmaceutically acceptable salt ~~salts~~, pharmaceutically acceptable ~~solvates,~~ ~~enantiomers~~, ~~diastereomers~~ enantiomer, diastereomer, or N-oxide, N-~~oxides~~ wherein

R_1 is selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cyano; nitro; amino; substituted amino; hydroxyl; alkoxy; aryloxy; COR′; COOR′

(wherein R′ can be hydrogen, alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heterocyclyl, (heterocyclyl)alkyl, or (heteroaryl)alkyl);
aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl) alkyl; (heterocyclyl) alkyl; $(CH_2)_{1-4}OR'$

(wherein R′ is as defined above, but also including hydroxy);

$C(=O)NR_xR_y$

(wherein R_x and R_y can be independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl); or $(CH_2)_m$-$C(=O)R_3$ [wherein m is an integer in the range of 0-2 and R_3 can be optionally substituted R_p or R_q (wherein R_p can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 1-4 heteroatom(s) selected from N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through N and R_q can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 0-4 heteroatom(s) selected from the group consisting of N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through C) and wherein the substituents of R_3 can be one or more of: alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, halogen, hydroxyl,

alkoxy, aryloxy, nitro, cyano, amino, substituted amino, hydroxyalkyl, oxo, acyl, optionally substituted amino (wherein the substituents are selected from C_1-C_6 alkyl, aryl, aralkyl, or cycloalkyl), aryl, carboxyl, alkaryl, carbamoyl, alkyl ether, $C(=O)NR_5R_6$ (wherein R_5 and R_6 are independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, aryl, and aralkyl), optionally substituted monocyclic or bicyclic 4-12 membered carbocyclic ring system (wherein the optional substituent(s) is/are selected from alkyl, alkenyl, alkynyl, halogen, hydroxyl, and alkoxy), heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl];

R_4 is selected from: hydrogen; alkyl; halogen; cyano; carboxy; or $C(=O)NR_xR_y$ wherein R_x and R_y are the same as defined above;

Y is selected from: an oxygen atom; a sulphur atom; or NR

(wherein R is selected from hydrogen, alkyl, alkenyl, alkynyl, un(saturated) cycloalkyl, acyl, aryl, aralkyl, heteroaryl, heterocyclyl, (heteroaryl)alkyl, or (heterocyclyl)alkyl);

Y_1 and Y_2 are independently selected from: hydrogen; alkyl; nitro; cyano; halogen; OR wherein R is the same as defined earlier; SR wherein R is the same as defined earlier; NHR wherein R is the same as defined earlier; COOR′; or COR′ wherein R′ is the same as defined above, or further, Y_1 and X_2, X_1 and Y_2, X_1 and X_2 may together form a ring fused with the ring A containing 3-5 carbon atoms within the ring and having 1-3 heteroatoms selected from N, O or S;

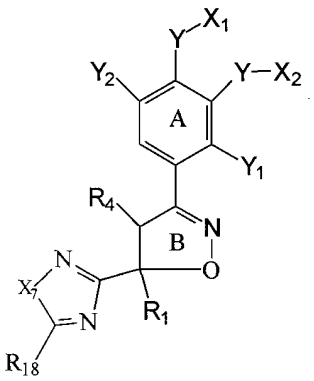
X_1 represents alkyl;

X_2 represents alkyl, cycloalkyl or aralkyl;

X_3, X_4, X_5 and X_6 independently represent C, CH, CH_2, CO, CS, NH, N, O, S; R_{15}, R_{16}, and R_{17} independently represent no atom, alkyl, $COCH_3$, $COOC_2H_5$, NH_2, NH-cyclopropyl, CN, SH; and

---- represents an optional single bond.

4. (Currently Amended) The compound of claim 1 having the structure of Formula XXIII,



Formula XXXIII

~~their~~ a pharmaceutically acceptable salt ~~salts~~, pharmaceutically acceptable ~~solvates,~~ ~~enantiomers~~, ~~diastereomers~~ enantiomer, diastereomer, or N-oxide, N-~~oxides~~ wherein

R_1 is selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; cyano; nitro; amino; substituted amino; hydroxyl; alkoxy; aryloxy; COR′; COOR′

(wherein R′ can be hydrogen, alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heterocyclyl, (heterocyclyl)alkyl, or (heteroaryl)alkyl);

aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl) alkyl; (heterocyclyl) alkyl; $(CH_2)_{1-4}OR'$

(wherein R′ is as defined above, but also including hydroxy);

$C(=O)NR_xR_y$

(wherein R_x and R_y can be independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl); or $(CH_2)_m$-C(=O)R_3 [wherein m is an integer in the range of 0-2 and R_3 can be optionally substituted R_p or R_q (wherein R_p can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 1-4 heteroatom(s) selected from N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through N and R_q can be a 4-12 membered (un)saturated monocyclic or bicyclic ring containing 0-4 heteroatom(s) selected from the group consisting of N, O and S wherein the ring can be attached to $(CH_2)_mC(=O)$ through C) and wherein the substituents of R_3 can be one or more of: alkyl, alkenyl, alkynyl, (un)saturated cycloalkyl, halogen, hydroxyl,

alkoxy, aryloxy, nitro, cyano, amino, substituted amino, hydroxyalkyl, oxo, acyl, optionally substituted amino (wherein the substituents are selected from C_1-C_6 alkyl, aryl, aralkyl, or cycloalkyl), aryl, carboxyl, alkaryl, carbamoyl, alkyl ether, $C(=O)NR_5R_6$ (wherein R_5 and R_6 are independently selected from hydrogen, alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, aryl, and aralkyl), optionally substituted monocyclic or bicyclic 4-12 membered carbocyclic ring system (wherein the optional substituent(s) is/are selected from alkyl, alkenyl, alkynyl, halogen, hydroxyl, and alkoxy), heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl];

R_4 is selected from: hydrogen; alkyl; halogen; cyano; carboxy; or $C(=O)NR_xR_y$ wherein R_x and R_y are the same as defined above;

X_1 and X_2 are independently selected from: hydrogen; alkyl; alkenyl; alkynyl; cycloalkyl; acyl; aryl; aralkyl; heteroaryl; heterocyclyl; (heteroaryl)alkyl; or (heterocyclyl)alkyl;

Y is selected from: an oxygen atom; a sulphur atom; or NR

(wherein R is selected from hydrogen, alkyl, alkenyl, alkynyl, un(saturated) cycloalkyl, acyl, aryl, aralkyl, heteroaryl, heterocyclyl, (heteroaryl)alkyl, or (heterocyclyl)alkyl);

Y_1 and Y_2 are independently selected from: hydrogen; alkyl; nitro; cyano; halogen; OR wherein R is the same as defined earlier; SR wherein R is the same as defined earlier; NHR wherein R is the same as defined earlier; COOR′; or COR′ wherein R′ is the same as defined above, or further, Y_1 and X_2, X_1 and Y_2, X_1 and X_2 may together form a ring fused with the ring A containing 3-5 carbon atoms within the ring and having 1-3 heteroatoms selected from N, O or S;

X_7 represents O or S; and

R_{18} represents hydrogen, alkyl, aryl, heteroaryl, cycloalkyl or heterocyclyl.

5. (Original) The compound of claim 1 wherein R_2 is cyano.

6. (Original) The compound of claim 1 wherein R_2 is $(CH_2)_nNHCOR_7$, n represents an integer 1 to 6; and R_7 can represent hydrogen, alkyl, alkenyl, alkynyl, (un)saturated, cycloalkyl, alkoxy, aryloxy, aryl, aralkyl, heteroaryl, heterocyclyl, $(CH_2)_{1-4}OR'$ wherein R′ is the same as defined above, or NR_xR_y (wherein R_x and R_y can be independently selected from hydrogen,

alkyl, C_{3-6} alkenyl, C_{3-6} alkynyl, (un)saturated cycloalkyl, aryl, aralkyl, heteroaryl, heterocyclyl, heteroarylalkyl, or heterocyclylalkyl).

7. (Original) The compound of claim 1 wherein R_2 is 6-membered heteroaryl.

8. (Original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1, together with at least one pharmaceutically acceptable carrier, excipient or diluent.

9. (Previously Cancelled)

10. (Previously Cancelled)

11. (Previously Cancelled)

12. (Previously Cancelled)

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28. (Previously Cancelled)